

Message

Sent: 2/11/2019 10:33:24 PM
To: Steve Warner [SWarner@cgrs.com]
Subject: RE: Compressor Station - Component Count

Hi Steve,

I consulted with our LDAR expert and she suggested:

40 CFR §§ 60.5365 and 60.5365a identify various affected facilities subject to OOOO and OOOOa, including:

- §§ 60.5365(b) and (c), and 60.5365a(b) and (c), identify that **centrifugal compressors** and **reciprocating compressors** are affected facilities;
- §§ 60.5365(f)(2) and 60.5365a(f)(2) identify that **equipment** associated with a **compressor station** located at an onshore **natural gas processing plant** is an affected facility; and
- §§ 60.5365a(j) identify that the collection of **fugitive emissions components** at a **compressor station** is an affected facilities.

Additionally, §§ 60.5430 and 60.5430a define: *Centrifugal compressor, Compressor station, Equipment, Natural gas processing plant, and Reciprocating compressor*; and § 60.5430a defines *Fugitive emissions component*.

Finally, the requirements for the various affected facilities are discussed in the following sections:

- §§ 60.5380 and 60.5380a What standards apply to centrifugal compressor affected facilities? And What GHG and VOC standards apply to centrifugal compressor affected facilities?, respectively;
- §§ 60.5385 and 60.5385a What standards apply to reciprocating compressor affected facilities? And What GHG and VOC standards apply to reciprocating compressor affected facilities?, respectively;
- Per §§ 60.5365(f)(2) and 60.5365a(f)(2), equipment associated with a compressor station located at an onshore natural gas processing is covered by §§ 60.5400, 60.5401, 60.5402, 60.5421, and 60.5422; and §§ 60.5400a, 60.5401a, 60.5402a, 60.5421a, and 60.5422a, respectively.
- §§ 60.5397a What fugitive emissions GHG and VOC standards apply to the affected facility which is the collection of fugitive emissions components at a well site and the affected facility which is the collection of fugitive emissions components at a compressor station?

Of course there other requirements that would apply to affected facilities, for example: demonstrating initial and continuous compliance, performance testing, monitoring requirements, notifications, recordkeeping and reporting.

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From: Steve Warner <SWarner@cgrs.com>
Sent: Thursday, February 7, 2019 4:54 PM
To: North, Alexis <North.Alexis@epa.gov>
Subject: RE: Compressor Station - Component Count

Alexis,

I just had a client ask if centrifugal compressors with dry seals are exempt from LDAR monitoring under OOOO and OOOOa, so I pulled up the below email for reference.

I'm wondering if there is a difference between the references to a compressor vs a compressor station – or in OOOOa are these equal to each other. It just seems that your initial comments below would state that all compressor stations would (based on date) require LDAR, and yet looking at the attached document, section 4.1, I see that dry seal centrifugal compressors are not affected facilities.

Could it be that we're saying the centrifugal compressor doesn't require LDAR, but the rest of the compressor station does? Could you add clarification to this thought?

Thanks much!

Steve Warner
Project Engineer

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From: North, Alexis [<mailto:North.Alexis@epa.gov>]
Sent: Friday, December 21, 2018 1:56 PM
To: Steve Warner <SWarner@cgrs.com>
Subject: RE: Compressor Station - Component Count

Hi Steve,

I think you're asking if there are NSPS OOOOa fugitive emissions monitoring requirements at compressor stations? I believe **IF** a compressor station is constructed, modified or reconstructed after 9/18/2015 there is monitoring of fugitive emission components at compressor stations per [60.5365a\(j\)](#) and [60.5397a](#). The installation of the new compressors likely triggers a modification per 60.5365a(j)(1):

"60.5365a(j) The collection of fugitive emissions components at a compressor station, as defined in §60.5430a, is an affected facility. For purposes of §60.5397a, a "modification" to a compressor station occurs when: (1) An additional compressor is installed at a compressor station; or"

There isn't a general requirement to have a "count" of fugitive components, unless the facility is using Method 21 to detect fugitive emissions in which case: (1) the fugitive emissions monitoring plan must include a list of fugitive emissions components (see § 60.5397a(d)(3)), and (2) records must be maintained of fugitive emission component identification (see § 60.5420a(c)(15)(F)). Additionally, there are circumstances when information about components is required to be identified, reported or recorded, for example:

- Fugitive components designated as "difficult-to-monitor" or "unsafe-to-monitor" must be identified in separate plans which are incorporated into the fugitive emission monitoring plan, see §§ 60.5397a(g)(3) and (g)(4);
- Annual reports submitted must include the number and type of components for which fugitive emissions were detected, number and type of fugitive emissions components that were not repaired, number and type of difficult-to-monitor and unsafe-to-monitor fugitive emission components monitored, date of successful repair of the fugitive emissions component, and number and type of fugitive emission components placed on delay of repair and explanation for each delay of repair, see § 60.5420a(b)(7);
- Records must be maintained documenting each fugitive emission, including location, number and type of components for which fugitive emissions were detected, number and type of difficult-to-monitor and unsafe-to-monitor fugitive emission components monitored, number and type of fugitive emissions

components that were not repaired, number and type of components that were tagged as a result of not being repaired during the monitoring survey when the fugitive emissions were initially found, number and type of fugitive emission components placed on delay of repair and explanation for each delay of repair, and the date of successful repair of the fugitive emissions component, § 60.5420a(c)(15)(I);and

You are correct that there is also rod packing requirements for reciprocating compressor compressors (60.5385a) in addition to the fugitive emissions monitoring.

I hope this helps.

Let me know if you have additional questions,

Alex

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From: Steve Warner <SWarner@cgrs.com>
Sent: Tuesday, December 18, 2018 3:24 PM
To: North, Alexis <North.Alexis@epa.gov>
Subject: Compressor Station - Component Count

Alexis,
Thanks much for the phone chat. Here's a recap of my question, and what I've discovered so far...

Question: Does a compressor station have to complete component counts under OOOOa?

I've asked the client to identify his compressors to know if they are centrifugal or reciprocating. We believe they are reciprocating, so following that path it appears very clear to me that it's all about "rod packing". All maintenance, tracking, reporting, and replacement seems centered around the rod packing. Following all the paths for this compressor I see no discussion on component counts.

A second part to the question is that I know they have installed some new turbine compressors, and I don't know yet if this falls under centrifugal. That too is waiting on the client's comments.

Any thoughts are certainly welcome. Thank you very much for your help!

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